

We Claim:

- Sub A1
- 1) A process for delivering a nucleic acid to a cardiac tissue cell in a mammal, comprising:
 - a) introducing the nucleic acid into a vessel; and,
 - b) delivering the nucleic acid to the cardiac tissue cell.

- 2) The process of claim 1 wherein the nucleic acid is expressed.

- Sub A2
- 3) The process of claim 2 wherein inserting the nucleic acid comprises injecting the nucleic acid.

- Sub A2
- 4) The process of claim 3 wherein injecting the nucleic acid includes injecting the nucleic acid through a catheter.

- Sub A3
- 5) The process of claim 4 wherein delivering the nucleic acid includes increasing the vessel permeability.

- 6) The process of claim 5 wherein the nucleic acid is selected from the group consisting of DNA, RNA, plasmid DNA, and viruses.

- 7) The process of claim 1 wherein the nucleic acid modifies expression of cellular material.

- 8) The process of claim 7 wherein inserting the nucleic acid comprises injecting the nucleic acid.

- 9) The process of claim 8 wherein injecting the nucleic acid includes injecting the nucleic acid through a catheter.

- Sub A4
- 10) The process of claim 9 wherein delivering the nucleic acid includes increasing the vessel permeability.

Sub
A4

11) The process of claim 10 wherein the nucleic acid is selected from the group consisting of DNA, RNA, plasmid DNA, oligonucleotides, and viruses.

12) The process of claim 4 wherein delivering the nucleic acid includes changing a predetermined volume of nucleic acid during a predetermined time.

13) The process of claim 12 wherein delivering the nucleic acid includes increasing the vessel permeability.

14) The process of claim 13 wherein the nucleic acid is selected from the group consisting of DNA, RNA, plasmid DNA, and viruses.

15) The process of claim 9 wherein delivering the nucleic acid includes increasing internal pressure of the vessel.

16) The process of claim 15 wherein delivering the nucleic acid includes increasing the vessel permeability.

17) The process of claim 16 wherein the nucleic acid is selected from the group consisting of DNA, RNA, plasmid DNA, and viruses.

18) A process for gene therapy, comprising:

- a) inserting a nucleic acid into a vessel having a channel leading to cardiac tissue;
- b) delivering the nucleic acid to a cardiac tissue cell; and,
- c) expressing the nucleic acid.

19) The process of claim 18 wherein inserting the nucleic acid comprises injecting the nucleic acid.

Sub
C4

20) The process of claim 19 wherein injecting the nucleic acid includes injecting the nucleic acid through a catheter.

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B2